

P03-268

ARE THE GENES OF STRESS INVOLVED IN THE VULNERABILITY TO SUICIDE ATTEMPTS AND IN RELATED-ENDOPHENOTYPES?

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Molecular genetic studies have initially focused on genes of the serotonergic system, providing consistent evidence for their implication in the susceptibility to suicidal behaviour. More recent data suggested the existence of interactions with environmental stress factors, and the influence of various polymorphisms on decision making, a potential endophenotype for suicidal behaviour. On the other hand, abnormalities of the HPA axis may represent another trait marker, associated with the occurrence of completed suicide in prospective studies of depressed patients. The demonstration of both interactions between the HPA axis and the serotonin system at the biological level, and the well-known involvement of stress factors in triggering suicidal acts, led researchers to investigate the possibility for stress-related genes to play a role in the vulnerability to suicidal behaviour. We investigated the influence of several stress-related genes, namely CRH receptors, FKBP5, Arginin Vasopressin receptor V1b and NRY on the vulnerability to suicide attempts, performing an association study in a sample of 1650 patients and 420 controls in order to detect an association between suicidal behaviour and these polymorphisms. We further investigated the existence of an effect of the interaction between these genotypes and childhood abuse on the severity index of suicidal behaviour. Last, we proposed to study the influence of stress-related polymorphisms on the cognitive vulnerability factor, decision making.

The addition of new data concerning genes that intervene in the stress axis may help researchers to refine the biological pathways of the vulnerability to suicidal behaviour, going beyond the demonstration of genes environment interactions.